In the Claims:

1. (Currently Amended) A method of conducting a process hazard analysis (PHA), comprising the following steps that are performed in a data processing system:

storing information describing a plurality of chemical processes in the data processing system;

storing information describing a plurality of study types in the data processing system;

selecting **[[a]]** one of the plurality of chemical ~~process~~ processes to be evaluated;

selecting **[[a]]** one of the plurality of study **[[type]]** types to be performed on the one of the plurality of chemical ~~process~~ processes;

conducting the selected study type on the selected chemical process in the data processing system, wherein the chemical process is evaluated on the data processing system for the presence of a hazard scenario; and then

generating a resolution plan to the hazard scenario in the data processing system.

2. (Previously Amended) The method of Claim 1, wherein the study type is selected from the group consisting of Tennessee Eastman Division Process Hazard Analysis (TEDPHA), Texas PHA (TEXPHA), Maintenance and Operability (MOP) and Distributed Control System (DCS) study types.

3. (Original) The method of Claim 1, wherein the PHA is conducted in order to comply with the Process Safety Management (PSM) standard and the Environmental Protection Agency Risk Management Plan.

4. (Original) The method of Claim 1, wherein the chemical process is evaluated for a Worst Case Credible Consequence hazard scenario.

5. (Original) The method of Claim 1, wherein the study type is a revalidation study of the chemical process.

6. (Original) The method of Claim 1, wherein the study type is an initial study of the chemical process.

7. (Original) The method of Claim 1, further comprising the step of dividing the process into nodes prior to the conducting step.

8. (Original) The method of Claim 1, wherein the conducting step comprises the generation of a risk ranking of the hazard scenario.

9. (Original) The method of Claim 8, wherein the generation of a risk ranking comprises the analysis of a risk matrix.

10. (Original) The method of Claim 1, further comprising the step of customizing the study type prior to the conducting step.

11. (Original) The method of Claim 10, wherein the customizing step comprises generating a list of questions to evaluate the chemical process.

12. (Original) The method of Claim 10, wherein the customizing step comprises creating a risk matrix to evaluate the chemical process.

13. (Original) The method of Claim 12, wherein the risk matrix comprises parameters of consequence severity.

14. (Original) The method of Claim 12, wherein the risk matrix comprises parameters of the frequency of occurrence of a consequence.

15. (Original) The method of Claim 1, further comprising the documentation of the hazard scenario prior to the generation of the resolution plan.

16. (Original) The method of Claim 1, wherein the resolution plan comprises more than one action item.

17. (Currently Amended) The method of Claim 1, wherein the resolution plan comprises a final action item and at least one interim action item to be completed prior to the completion of the final action **[[plan]]** item.

18. (Original) The method of Claim 1, wherein the resolution plan comprises at least one target date for completing an action item.

19. (Previously Presented) The method of Claim 1, wherein the generating step is followed by a tracking step, whereby the status of the resolution plan is monitored for completion of action items.

20. (Original) The method of Claim 19, wherein the status of the resolution plan is monitored for completion of action items by the target date.

21. (Original) The method of Claim 1, further comprising the step of generating at least one report.

22. (Original) The method of Claim 21, wherein the report comprises a description of the hazard scenario and the resolution plan.

23. (Original) The method of Claim 1, further comprising the step of generating a resolution database after the step of generating the resolution plan.

24. (Original) The method of Claim 23, wherein the resolution database comprises one or more parameters selected from the group consisting of the names of persons responsible for carrying out the resolution plan, departments responsible for carrying out the resolution plan, sites at which the resolution plan will be carried out, target dates for completion of the resolution plan, completed action items, and uncompleted action items.

25. (Currently Amended) A data processing system for conducting a process hazard analysis, comprising:

means for storing information describing a plurality of chemical processes;

means for storing information describing a plurality of study types;

means for selecting **[[a]]** one of the plurality of chemical ~~process~~ processes to be evaluated;

means for selecting **[[a]]** one of the plurality of study **[[type]]** types to be performed on the one of the plurality of chemical ~~process~~ processes;

means for conducting the selected study type on the selected chemical process, wherein the chemical process is evaluated on the data processing system for the presence of a hazard scenario; and

means for generating a resolution plan to the hazard scenario.

26. (Previously Presented) The system of Claim 25, wherein the selecting means comprises means for selecting the study type from the group consisting of Tennessee Eastman Division Process Hazard Analysis (TEDPHA), Texas PHA (TEXPHA), Maintenance and Operability (MOP) and Distributed Control System (DCS) study types.

27. (Original) The system of Claim 25, wherein the conducting means comprises means for evaluating the chemical process for a Worst Case Credible Consequence hazard scenario.

28. (Original) The system of Claim 25, wherein the selecting means comprises means for selecting a revalidation study of the chemical process.

29. (Original) The system of Claim 25, wherein the selecting means comprises means for selecting an initial study of the chemical process.

30. (Original) The system of Claim 25, wherein the conducting means comprises means for conducting a revalidation study of the chemical process.

31. (Original) The system of Claim 25, wherein the conducting means comprises means for conducting an initial study of the chemical process.

32. (Original) The system of Claim 25, further comprising means for dividing the chemical process into nodes prior to the study being conducted.

33. (Original) The system of Claim 25, the conducting means comprises means for generating a risk ranking of the hazard scenario.

34. (Original) The system of Claim 33, wherein the means for generating a risk ranking comprises means for analyzing a risk matrix.

35. (Original) The system of Claim 25, further comprising means for customizing the study type.

36. (Original) The system of Claim 35, wherein the customizing means comprises means for generating a list of questions to evaluate the chemical process.

37. (Original) The system of Claim 35, wherein the customizing means comprises means for creating a risk matrix to evaluate the chemical process.

38. (Original) The system of Claim 25, further comprising means for documenting the hazard scenario.

39. (Original) The system of Claim 25, wherein the means for generating a resolution plan to the hazard scenario comprises means for generating a resolution plan comprising more than one action item.

40. (Currently Amended) The system of Claim 25, wherein the means for generating a resolution plan to the hazard scenario comprises means for generating a resolution plan with a final action item and at least one interim action item to be completed prior to the completion of the final action **[[**plan**]]** <u>item</u>.

41. (Original) The system of Claim 25, wherein the means for generating a resolution plan to the hazard scenario comprises means for generating a resolution plan with at least one target date for completing an action item.

42. (Original) The system of Claim 25, further comprising tracking means for monitoring the status of the resolution plan for completion of action items.

43. (Original) The system of Claim 25, further comprising means for generating at least one report.

44. (Original) The system of Claim 43, wherein the means for generating at least one report comprises means for generating a report comprising a description of the hazard scenario and the resolution plan.

45. (Original) The system of Claim 25, further comprising means for generating a resolution database.

46. (Original) The system of Claim 45, wherein the means for generating a resolution database comprise means for generating a resolution database comprising one or more parameters selected from the group consisting of the names of persons responsible for carrying out the resolution plan, departments responsible for carrying out the resolution plan, sites at which the resolution plan will be carried out, target dates for completion of the resolution plan, completed action items, and uncompleted action items.

47. (Currently Amended) A computer program product for conducting a process hazard analysis, the computer program product comprising a computer-readable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

<u>computer-readable program code for storing information describing a plurality of chemical processes;</u>

<u>computer-readable program code for storing information describing a plurality of study types;</u>

computer-readable program code for selecting [[a]] one of the plurality of chemical ~~process~~ processes to be evaluated;

computer-readable program code for selecting [[a]] one of the plurality of study [[type]] types to be performed on the one of the plurality of chemical ~~process~~ processes;

computer-readable program code for conducting the selected study type on the chemical process, wherein the chemical process is evaluated for the presence of a hazard scenario; and

computer-readable program code for generating a resolution plan to the hazard scenario.

48. (Previously Presented) The computer program product of Claim 47, wherein the computer-readable program code for selecting the study type comprises computer-readable program code for selecting the study type from the group consisting of Tennessee Eastman Division Process Hazard Analysis (TEDPHA), Texas PHA (TEXPHA), Maintenance and Operability (MOP) and Distributed Control Computer program product (DCS) study types.

49. (Original) The computer program product of Claim 47, wherein the computer-readable program code for conducting the study type comprises computer-readable program code for evaluating the chemical process for a Worst Case Credible Consequence hazard scenario.

50. (Original) The computer program product of Claim 47, wherein the computer-readable program code for selecting the study type comprises computer-readable program code for selecting a revalidation study of the chemical process.

51. (Original) The computer program product of Claim 47, wherein the computer-readable program code for selecting the study type comprises computer-readable program code for selecting an initial study of the chemical process.

52. (Original) The computer program product of Claim 47, wherein the computer-readable program code for conducting the study type comprises computer-readable program code for conducting a revalidation study of the chemical process.

53. (Original) The computer program product of Claim 47, wherein the computer-readable program code for conducting the study type comprises computer-readable program code for conducting an initial study of the chemical process.

54. (Original) The computer program product of Claim 47, further comprising computer-readable program code for dividing the chemical process into nodes prior to the study being conducted.

55. (Original) The computer program product of Claim 47, computer-readable program code for conducting the selected study type comprises computer-readable program code for generating a risk ranking of the hazard scenario.

56 (Original) The computer program product of Claim 47, wherein the computer-readable program code for generating a risk ranking comprises computer-readable program code for analyzing a risk matrix.

57. (Original) The computer program product of Claim 47, further comprising computer-readable program code for customizing the study type.

58. (Original) The computer program product of Claim 57, wherein computer-readable program code for customizing the study type comprises computer-readable program code for generating a list of questions to evaluate the chemical process.

59. (Original) The computer program product of Claim 57, wherein the computer-readable program code for customizing the study type comprises computer-readable program code for creating a risk matrix to evaluate the chemical process.

60. (Original) The computer program product of Claim 47, further comprising computer-readable program code for documenting the hazard scenario.

61. (Original) The computer program product of Claim 47, wherein the computer-readable program code for generating a resolution plan to the hazard scenario comprises computer-readable program code for generating a resolution plan comprising more than one action item.

62. (Currently Amended) The computer program product of Claim 47, wherein the computer-readable program code for generating a resolution plan to the hazard scenario comprises computer-readable program code for generating a resolution plan with a final action item and at least one interim action item to be completed prior to the completion of the final action [[plan]] item.

63. (Original) The computer program product of Claim 47, wherein the computer-readable program code for generating a resolution plan to the hazard scenario comprises computer-readable program code for generating a resolution plan with at least one target date for completing an action item.

64. (Original) The computer program product of Claim 47, further comprising computer-readable program code for tracking, comprising computer-readable program code for monitoring the status of the resolution plan for completion of action items .

65. (Original) The computer program product of Claim 47, further comprising computer-readable program code for generating at least one report.

66. (Original) The computer program product of Claim 65, wherein the computer-readable program code for generating at least one report comprises computer-readable program code for generating a report comprising a description of the hazard scenario and the resolution plan.

67. (Original) The computer program product of Claim 47, further comprising computer-readable program code for generating a resolution database.

68. (Original) The computer program product of Claim 67, wherein the computer-readable program code for generating a resolution database comprise computer-readable program code for generating a resolution database comprising one or more of parameters selected from the group consisting of the names of persons responsible for carrying out the resolution plan, departments responsible for carrying out the resolution plan, sites at which the resolution plan will be carried out, target dates for completion of the resolution plan, completed action items, and uncompleted action items.

69-74. (Canceled)

75. (New) A method of conducting a process hazard analysis (PHA), comprising the following steps that are performed in a data processing system:

storing information describing a plurality of chemical processes in the data processing system;

storing information describing a plurality of study types in the data processing system;

selecting one of the plurality of chemical processes to be evaluated;

selecting one of the plurality of study types to be performed on the one of the plurality of chemical processes;

customizing the selected study type on the data processing system by creating a risk matrix to evaluate the selected chemical process on the data processing system;

conducting the customized selected study type on the selected chemical process in the data processing system, wherein the chemical process is evaluated on the data processing system for the presence of a hazard scenario; and then

generating a resolution plan to the hazard scenario in the data processing system.

76. (New) The method of Claim 75, wherein the customizing step comprises generating a list of questions to evaluate the chemical process.

77. (New) The method of Claim 75, wherein the risk matrix comprises parameters of consequence severity.

78. (New) The method of Claim 75, wherein the risk matrix comprises parameters of the frequency of occurrence of a consequence.

79. (New) A data processing system for conducting a process hazard analysis, comprising:

means for storing information describing a plurality of chemical processes;

means for storing information describing a plurality of study types;

means for selecting one of the plurality of chemical processes to be evaluated;

means for selecting one of the plurality of study types to be performed on the one of the plurality of chemical processes;

means for customizing the selected study type by creating a risk matrix to evaluate the selected chemical process on the data processing system;

means for conducting the customized selected study type on the selected chemical process, wherein the chemical process is evaluated on the data processing system for the presence of a hazard scenario; and

means for generating a resolution plan to the hazard scenario.

80. (New) The system of Claim 79, wherein the customizing means comprises means for generating a list of questions to evaluate the chemical process.

81. (New) The system of Claim 79, wherein the risk matrix comprises parameters of consequence severity.

82. (New) The system of Claim 79, wherein the risk matrix comprises parameters of the frequency of occurrence of a consequence.

83. (New) A computer program product for conducting a process hazard analysis, the computer program product comprising a computer-readable storage medium

having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code for storing information describing a plurality of chemical processes;

computer-readable program code for storing information describing a plurality of study types;

computer-readable program code for selecting one of the plurality of chemical processes to be evaluated;

computer-readable program code for selecting one of the plurality of study types to be performed on the one of the plurality of chemical processes;

computer-readable program code for customizing the selected study type by creating a risk matrix to evaluate the selected chemical process;

computer-readable program code for conducting the customized selected study type on the chemical process, wherein the chemical process is evaluated for the presence of a hazard scenario; and

computer-readable program code for generating a resolution plan to the hazard scenario.

84. (Original) The computer program product of Claim 83, wherein computer-readable program code for customizing the study type comprises computer-readable program code for generating a list of questions to evaluate the chemical process.

85. (New) The computer program product of Claim 83, wherein the risk matrix comprises parameters of consequence severity.

86. (New) The computer program product of Claim 83, wherein the risk matrix comprises parameters of the frequency of occurrence of a consequence.

87. (New) A method of conducting a process hazard analysis (PHA), comprising the following steps that are performed in a data processing system:

storing information describing a plurality of chemical processes in the data processing system;

storing information describing a plurality of study types in the data processing system;

selecting one of the plurality of chemical processes to be evaluated;

selecting one of the plurality of study types to be performed on the one of the plurality of chemical processes;

conducting the selected study type on the selected chemical process in the data processing system, wherein the chemical process is evaluated on the data processing system for the presence of a hazard scenario;

generating a resolution plan to the hazard scenario in the data processing system, wherein the resolution plan comprises a final action item, at least one interim action item to be completed prior to the completion of the final action item and at least one target date for completing an action item; and

tracking the resolution plan in the data processing system, to monitor for completion of action items, wherein the status of the resolution plan is monitored for completion of action items by the target date.

88. (New) The method of Claim 87, further comprising the step of generating at least one report.

89. (New) The method of Claim 88, wherein the report comprises a description of the hazard scenario and the resolution plan.

90. (New) The method of Claim 87, further comprising the step of generating a resolution database after the step of generating the resolution plan.

91. (New) The method of Claim 90, wherein the resolution database comprises one or more parameters selected from the group consisting of the names of persons responsible for carrying out the resolution plan, departments responsible for carrying out the resolution plan, sites at which the resolution plan will be carried out, target dates for completion of the resolution plan, completed action items, and uncompleted action items.

92. (New) A data processing system for conducting a process hazard analysis, comprising:

means for storing information describing a plurality of chemical processes;

means for storing information describing a plurality of study types;

means for selecting one of the plurality of chemical processes to be evaluated;

means for selecting one of the plurality of study types to be performed on the one of the plurality of chemical processes;

means for conducting the selected study type on the selected chemical process, wherein the chemical process is evaluated on the data processing system for the presence of a hazard scenario;

means for generating a resolution plan to the hazard scenario, wherein the resolution plan comprises a final action item, at least one interim action item to be completed prior to the completion of the final action item and at least one target date for completing an action item; and

means for monitoring the status of the resolution plan for completion of action items by the target date.

93. (New) The system of Claim 92, further comprising means for generating at least one report.

94. (New) The system of Claim 93, wherein the means for generating at least one report comprises means for generating a report comprising a description of the hazard scenario and the resolution plan.

95. (New) The system of Claim 92, further comprising means for generating a resolution database.

96. (New) The system of Claim 95, wherein the means for generating a resolution database comprise means for generating a resolution database comprising one or more parameters selected from the group consisting of the names of persons responsible for carrying out the resolution plan, departments responsible for carrying out

the resolution plan, sites at which the resolution plan will be carried out, target dates for completion of the resolution plan, completed action items, and uncompleted action items.

97. (New) A computer program product for conducting a process hazard analysis, the computer program product comprising a computer-readable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code for storing information describing a plurality of chemical processes;

computer-readable program code for storing information describing a plurality of study types;

computer-readable program code for selecting one of the plurality of chemical processes to be evaluated;

computer-readable program code for selecting one of the plurality of study types to be performed on the one of the plurality of chemical processes;

computer-readable program code for conducting the selected study type on the chemical process, wherein the chemical process is evaluated for the presence of a hazard scenario;

computer-readable program code for generating a resolution plan to the hazard scenario, wherein the resolution plan comprises a final action item, at least one interim action item to be completed prior to the completion of the final action item, and at least one target date for completing action item; and

computer-readable program code for monitoring the status of the resolution plan for completion of action items.

98. (New) The computer program product of Claim 97, further comprising computer-readable program code for generating at least one report.

99. (New) The computer program product of Claim 98, wherein the computer-readable program code for generating at least one report comprises computer-readable program code for generating a report comprising a description of the hazard scenario and the resolution plan.

100. (New) The computer program product of Claim 97, further comprising computer-readable program code for generating a resolution database.

101. (New) The computer program product of Claim 100, wherein the computer-readable program code for generating a resolution database comprise computer-readable program code for generating a resolution database comprising one or more of parameters selected from the group consisting of the names of persons responsible for carrying out the resolution plan, departments responsible for carrying out the resolution plan, sites at which the resolution plan will be carried out, target dates for completion of the resolution plan, completed action items, and uncompleted action items.